

Low Field & Capture Studies (4/16/74), Daka, Gill, Herrera

The machine was "tuned" in order to maximize the accelerated beam.

Conditions

- 1) Linac ran very well after 0100, giving ~ 70 ma for 140 usec. Max after multistorm $\sim 1.2 \times 10^{13}$ p/p.
- 2) Per J. Claus, linac currents were up by approximately 1.5 times their normal values.
- 3) Average ring rate $\sim 3 \times 10^{-7}$ Torr.

Results

- 1) The max beam accelerated was 7.22×10^{12} p/p, with 7.5×10^{12} on the early counter. The machine ran steadily in the 7×10^{12} region.
- 2) In order to achieve 1) it was necessary to compromise the early beam counter reading and the effective turns ratio.
- 3) At one point, we could get 9.45×10^{12} p/p on the early monitor with about 8 turns. However, horizontal coherence appeared at about 20 ms after injected and the beam was very erratic with maxima of about 6.8×10^{12} p/p. The V values under this condition were ($v_H = 8.84$; $v_V = 8.75$).

JSA 4/16/74